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THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Gourlay
SERIAL NO.: 09/595,774 ✓ CONF No: 1171
FILING DATE: Jun 16, 2000
TITLE: CONTENT ROUTING SERVICES PROTOCOL
PATENT NO.: 6,850,980
ISSUED: Feb 1, 2005
EXAMINER: Michael Won
ART UNIT: 2155

Certificate
JUL 06 2005
of Correction

CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the United States Postal Service as First Class
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Date: June 28, 2005

Name: 
Penelope Sherman

Commissioner for Patents,
P.O. Box 1450 Alexandria, VA 22313-1450

TRANSMITTAL FOR CERTIFICATE OF CORRECTION

We enclose, pursuant to the provisions of 37 C.F.R. §1.322, a Certificate of
Correction for United States Patent No. 6,850,980. Please make the Certificate of
Correction and the statements herein of record.

The corrections made to the above-identified United States Patent in the Certificate
of Correction filed herewith are to correct mistakes which are of a minor character
according to 35 U.S.C. §254 and 37 C.F.R. §1.322. The proposed corrections do not

constitute such changes in the patent as would constitute new matter or would require re-examination.

37 C.F.R. §1.322 Corrections


Please see attached Certificate of Correction.

No Fee Due

It is believed that no fee is required for filing the above-noted document. In the event any fee is required for filing of this Certificate of Correction, the Assistant Commissioner is hereby authorized to charge the fee to our Deposit Account No. 50-1698.

Respectfully submitted,
THELEN REID & PRIEST LLP

Dated: June 28, 2005



David Ritchie
Reg. No. 31,562

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UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO : 6,850,980

DATED : Feb 1, 2005

INVENTOR(S) : Gourlay

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

- 1) In section 54 of the cover page replace "SERVICE' WITH --SERVICES--
- 2) In column 4 line 21 replace "uris" with --urls--.
- 3) In column 4 line 26 replace ".gif)" with --.gif")--.
- 4) In column 5 line 39 replace ".gif " with --.gif" --.
- 5) In column 5 line 40 replace "302" with --302--.
- 6) In column 5 line 42 replace "undated" with --updated--.

MAILING ADDRESS OF SENDER: Thelen Reid & Priest
PO Box 640640
San Jose, CA 640640

PATENT NO. 6,850,980

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This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO : 6,850,980

DATED : Feb 1, 2005

INVENTOR(S) : Gourlay

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

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San Jose, CA 94106

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Please acknowledge receipt of the following by affixing hereon the Patent Office date stamp and returning this card to our office.

Inventors: Douglas Gourlay

Serial No.: 09/595,774

Filing Date: June 16, 2000

Title: CONTENT ROUTING SERVICES PROTOCOL

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DEC 12 2000



Attorney: David B. Ritchie

Docket No.: CTSCO-2369

Office Action Date:

Papers Filed: 1. Request to Correct Filing Receipt and copy of last page;
2. Copy of Transmittal Letter; 3. Copy of Corrected Filing Receipt.

Atty Initials DBR
Admin Initials LD
Date filed 11/29/00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Douglas Gourlay
SERIAL NO.: 09/595,774
FILING DATE: June 16, 2000
TITLE: CONTENT ROUTING SERVICES PROTOCOL

CERTIFICATE OF MAILING

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OFFICE OF INITIAL PATENT EXAMINATION'S
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COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

REQUEST TO CORRECT FILING RECEIPT

It is respectfully submitted that the Filing Receipt for the above-identified patent application has an error.

The title is incorrect; the correct title is "CONTENT ROUTING SERVICES
PROTOCOL" and not "CONTENT ROUTING SERVICES PORTOCOL" as indicated on the Filing Receipt. Please amend the Filing Receipt and other appropriate records to reflect the correct title for the referenced patent application as "CONTENT ROUTING SERVICES PROTOCOL". A copy of the Transmittal Letter is enclosed showing the correct title.

Correction 1



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Serial/Patent No.: 09/595,774

Filing/Issue Date: 6/16/00

Applicant: Douglas Gourlay

Title: CONTENT ROUTING SERVICES PROTOCOL

TRP Docket No.: CISCO-2369

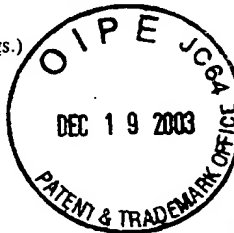
Atty/Secty Initials: MSH/CK/seb

Date Mailed: 12-16-03

Docket Due Date: 1/10/04

The following has been received in the U.S. Patent & Trademark Office on the date stamped hereon:

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|---|---|
| <input checked="" type="checkbox"/> Amendment/Response (37 pgs.) | <input type="checkbox"/> IDS & PTO 1449 (____ pgs.) |
| <input type="checkbox"/> Appeal Brief (____ pgs.) (in triplicate) | <input type="checkbox"/> ____ Pieces of Prior Art Enclosed |
| <input type="checkbox"/> Application - Utility (____ pgs. with cover & abstract) | <input type="checkbox"/> Issue Fee Transmittal |
| <input type="checkbox"/> Application - Rule 1.53(b) Continuation (____ pgs.) | <input type="checkbox"/> Submission of Formal Drawings:
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| <input type="checkbox"/> Assignment and Cover Sheet | <input type="checkbox"/> Request for Continued Examination (RCE) (____ pgs.) |
| <input type="checkbox"/> Certificate of Correction | <input type="checkbox"/> Request for Extension of Time 1 Month(s) |
| <input checked="" type="checkbox"/> Certificate of Mailing | <input type="checkbox"/> Response to Notice to File Missing Parts |
| <input type="checkbox"/> Declaration & POA (____ pgs.) | <input type="checkbox"/> Copy of PTO Notice to File Missing Parts |
| <input checked="" type="checkbox"/> Fee Transmittal | <input checked="" type="checkbox"/> Transmittal Letter (original & copy) |
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| | <input type="checkbox"/> Deposit Acct. No. 50-1698 \$ ____ |
| | Patent Code: 1251 |
| | Client/Matter # 32590 - 101 |



Amendments to the Specification

Please replace the paragraph on Page 13, lines 1-15 with the following amended paragraph:

FIG. 6 is a diagram illustrating an example of a routing table entry. As can be seen, the entry for "http://www.contentprovider.com/logos/logo.gif" 300 has serial/version number 2 302. When the logo is changed on contentprovider.com to version 3, there is a situation where the content needs to be update updated in multiple sites throughout the network. Referring back to FIG. 5, the server 250 may generate a route to the nearest switch (alternatively, a server load balancing platform may detect the content change and advertise the change to an upstream peer). The nearest switch may then examine its local routing table, looking for an entry sharing the same original location url in the url field. If one exists, the version numbers may be compared to determine if the content needs to be updated. Assuming the information received indicates a higher version number than the one already stored in the cache, the cache will undertake to update the content, including requesting the new version of the content from the server 250, storing the new content in the cache, updating its local routing table with the new version number, and updating the time/date stamp. The route may be propagated throughout the network until the logo with version 3 is known on all switches/routers.

Please replace the paragraph on page 14 line 21 through page 15 line 15 with the following amended paragraph:

FIG. 9 is a flow diagram illustrating a method for updating content in a computer network, the content located at a web server and having an original location, in accordance with another embodiment of the present invention. The original location of the content may be in the form of an http url. At 500, the content is altered. For example, a logo may be changed to a newer version. At 502, the alteration of the content is detected with a server load balancer through polling of the web server. Alternatively, the web server may directly notify the server load balancer when an updated update has been performed. At 504, a routing table entry is created for the content in a cache, said routing table entry having a record with a location field with the original location of said content, a distance field indicating the distance from said cache to the original location of said content, and a version number field indicating a version number of said content. The record may also include an IP address field that indicates the IP address and/or port of the web server. Fields indicating the date and time of the last update to the record, billing tokens or certificates for content peering between providers, Quality of Service processes to be applied when a user attempts to access the content, whether the content need not be stored in the cache, and server load balancing processes to be applied when a user attempts to access the content may also be added.



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EL575422828US

ORIGIN (POSTAL USE ONLY)

PO ZIP Code: 0616/2000

Date In: 06/16/2000

Mo: 06, Day: 16, Time In: 04:29:41 PM

Weight: 0.35

No Del: ☐

GUST: ☐ METH: ☐ Exp: ☐ Fee: ☐ Post: ☐

Product Description: WASHINGTON DC 20231-9999

Express Mail PO-ADD

Serial Number: EL575422828US

2nd day 3PM /Normal

Delivery Receipt

Return Receipt

Paid by account:

EMCA account number:

Total: \$17.00

Paid by: \$0.00

Bill #: 1000200489903

Clerk: 05

Thank you for your business

DELIVERY (POSTAL USE ONLY)

Delivery Attempt	Time	Employee Signature
Mo: 06, Day: 16	<input type="checkbox"/> AM <input type="checkbox"/> PM	
Delivery Attempt	Time	Employee Signature
Mo: 06, Day: 16	<input type="checkbox"/> AM <input type="checkbox"/> PM	
Delivery Attempt	Time	Employee Signature
Mo: 06, Day: 16	<input type="checkbox"/> AM <input type="checkbox"/> PM	



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- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

3. Article Addressed to:

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CISCO-2369

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address

2. ☐ Restricted Delivery

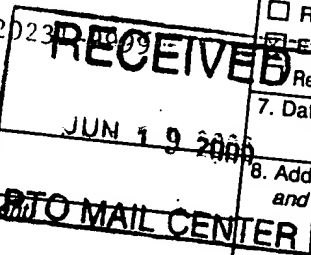
Consult postmaster for fee

EL575422828US

5. Received By: (Print Name)

DALESCA...

6. Signature: (Addressee or Agent) (X)



4b. Service Type

☐ Registered

☒ Express Mail

☐ Certified

☐ Insured

7. Date of Delivery: JUN 19 2000

8. Addressee's Address (Only if requested and fee is paid)

PTO MAIL CENTER

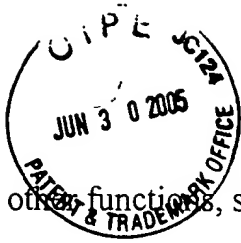
PS Form 3811, December 1994

102595-98-B-0229 Domestic Return Receipt

Mailing Label
Label 11-F July 1997

Customer Copy
Label 11-F July 1997

Thank you for using Return Receipt Service.



tag field 212 is provided for other functions, such as how to handle an object. Various options have been contemplated, such as storing a route in a routing table permanently for a more static-type routing, updating content serving sites, bypassing the cache, or applying a Quality of Service (QoS) parameter based on billing tags, urls, etc.

Correction 2

5

Referring back to FIG. 3, when a user wishes to view content created by contentprovider.com, as usual he will generate an http request packet with the corresponding http url (for example, "www.contentprovider.com/logos/logo.gif"). A normal http request packet requires a three-way handshaking procedure with a switch or router. SYN and ACK fields in the headers of the packets sent between the switch or router and the user indicate the stages of handshaking. When SYN=1 and ACK=0, the packet is an "open connection" packet sent by the user. When SYN=1 and ACK=1 the packet is an "open connection acknowledgement" packet sent by the switch or router. Finally, when SYN=0 and ACK=1 the packet indicates that the user is ready to send data. This results in a delay until at least the 4th packet is processed before the switch or router can examine information in the header of the payload packets.

Correction 3

01

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Eliminating the delay would allow a switch or router to determine whether or not it wishes to even establish a TCP/IP session based on content-specific information. This packet is forwarded to the closest switch 150a. However, rather than simply forward the request packet to another switch with the intention of eventually getting the packet to contentprovider.com's servers 154 for processing, the switch 150a may examine the

FIG. 6 is a diagram illustrating an example of a routing table entry. As can be seen, the entry for "http://www.contentprovider.com/logos/logo.gif" 300 has serial/version number 2 302. When the logo is changed on contentprovider.com to version 3, there is a situation where the content needs to be updated in multiple sites throughout the network. Referring back to FIG. 5, the server 250 may generate a route to the nearest switch (alternatively, a server load balancing platform may detect the content change and advertise the change to an upstream peer). The nearest switch may then examine its local routing table, looking for an entry sharing the same original location url in the url field. If one exists, the version numbers may be compared to determine if the content needs to be update. Assuming the information received indicates a higher version number than the one already stored in the cache, the cache will undertake to update the content, including requesting the new version of the content from the server 250, storing the new content in the cache, updating its local routing table with the new version number, and updating the time/date stamp. The route may be propagated throughout the network until the logo with version 3 is known on all switches/routers.

At any particular cache, once the content update is received, the routing table entry may be updated. This will generally include at least changing the date/time stamp and the serial/version number.

FIG. 7 is a diagram illustrating how the system for content switching in accordance with a specific embodiment of the present invention would appear after